Conformance Test Report
for EN301 406 v1.5.1 (2003-07)
Digital Enhanced Cordless Telecommunic. (DECT);
Harmonized EN for Digital Enhanced Cordless Telecommunications(DECT) covering essential requirements under article 3.2 of R&TTE Directive; Generic radio

Report No.: 60.860.8.008.01

Client:	SunCorp Communications Limited
Product:	DECT Phone
System Under Test (SUT):	DECT20-B14-RF19 (PP)
Manufacturer	Shenzhen Guo Wei Electronics Co., Ltd.
Date test item received:	2008/01/14
Date test campaign completed	2008/03/12
Date of issue:	2008/03/13
Test results:	COMPLIED

The test report include test result of conformance log layer 1.
Total number of pages of this test report: 27 pages

Approved by

Jeff Pong
Deputy Telecom Manager

TÜV SÜD Hong Kong Ltd.
TÜV SÜD Group
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1.1 Reason for measurements and identification of the protocol

The Test Candidate shall be tested to

DECT, General terminal attachment requirements

EN 300 406 V1.5.1	2003-07
EN 300 175-2, PHL	July 2003

1.1.1 Global statement of conformance

Has the applicant filled out the Client Test Preparation Information in accordance to EN301 406	**Yes**

see annex ,EN301 406 Statement of the applicant

1.2 Identification and functional description of the test candidate

1.2.1 Client identification

Name	SunCorp Communications Limited
Contact person	Mr. C.W. Cheung
Address	Room 1907-08, Harcourt House, 39 Gloucester Road, Wanchai, Hong Kong
Phone No.	86 755 25733333/ 25736666
Fax No.	86 755 5732288

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1.2.2   Identification of the Test Candidate:

RFPI of the FP with int. antenna	- -
RFPI of the FP with temp. ant. con.	0543210000
Hardware version	- -
Software version	- -
Operating voltage nom/min/max	2.4VDC/2.2VDC/2.8VDC
Serial No of the FP with int. antenna.	- -
Serial No of the FP with temp. ant. con.	- -

1.2.3   Functional description

The Test Candidate is a Portable Part with integrated antennas of a cordless telephone system for 3.1 kHz voice-communications on **DECT-standard.** For the integrated antennas a diversity-switch is included to the equipment. This Portable Part is used in combination with a Fixed Part (FP) for connections to the analogue public switched telephone network

For the tests one sample with integrated antenna and one sample with 50 Ω-connector were available to the test lab.

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1.3   Climatic Conditions

Temperature °C nominal value	Rel. Humidity %	Atmospheric Pressure
aimed +15°C - +35°C	aimed 20% - 75%	aimed 86 - 106 kPa

The requirements for temperature, rel. humidity and atmospheric pressure were observed and be within the specified range.

1.4   Measurement accuracy

The measurement accuracy is in accordance with EN301 406 V1.5.1 (2003-07)
Note: All values reflect a confidence level of 95 %.
The actual measurement uncertainties are described at each test.

1.5   Test equipment used

Equipment	Inventory-No.:
R&S DECT Type approval system TS 8930 FTAS:	
Process Controller	H1882000176
R&S Signalling unit TS1220	-
RF-Generator	H1882000179
RF-Generator	H1882000187
Spectrum- Analyzer	H1882000186
Switch Matrix	H1882000185
RF-Generator	H1882000162
Software	DOS-Version 3.02F from 19.02.99
Anechoic Chamber V	
Spectrum- Analyzer	H1882000161
RF-Pre-Amplifier	H1882000169
RF-Pre-Amplifier	H1882000170
RF-Filter	H1882000189
RF-Filter	H1882000190
RF-Antenna	H1882000145
RF-Antenna	H1882000146
RF-Antenna	H1882001604
RF-Antenna	H1882001605
Control-PC	H1882000140
Software T_Case_12	V 3.1 from 19.07.99

1.6   Explanation of the results abbreviations

P   = pass, inside of the specification

P* = pass, inside of the specification in consideration of the test accuracy

F   = failed, exceeding the specification

O   = not implicated

-    = not tested

?   = no clear result considering to the specification

*   = see note

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1.7   Comments for testing

Delivery date of Test Candidate: 2008.01.14
The tests were done from   2008.01.14 at 2008.03.12

Test Location
T01

During the tests were present:
Mr. Jeff Pong from **TÜV SÜD Hong Kong Ltd.**
Mr. C.W. Cheung from **SunCorp Communications Limited**

The test set-up and tests are according toEN301 406 V1.5.1(2003-07) and **DTAAB DT.04 V10 from 11/99** and the internal test comments of the test lab.

All measurements, in exception of parts of Testcase 6 and Testcase 12, were done at the equipment with 50 Ω-temporary antenna connector.

All radiated measurements were done in the anechoic chamber
The test site and the whole test equipment is according to standards
CTR6, TBR 6, third edition, June 1999.
EN301 406 V1.5.1(2003-07)

2   IUT conformance status according to EN301 406 V1.5.1 (2003-07)

2.1   IUT conformance summary

The IUT **has not been** shown by conformance assessment to be non
conforming to the general terminal attachment requirements, EN301 406

2.2   EN301 406 results overview

Test case	Point	Testcase description	Remarks	Sel.	Run	Verdict
1	4.5.1	Accuracy and stability of RF carriers		Y	Y	**Pass**
2	4.5.2	Timing jitter: slot - slot on the same channel		Y	Y	**Pass**
3		Reference timing accuracy of a RFP		N	N	**-----**
4		Measurement of packet timing accuracy	only for portable part	Y	Y	**Pass**
5	4.5.3	Transmission burst		Y	Y	**Pass**
6	4.5.4.1.1	Transmitted power (with an internal antenna) NTP		Y	Y	**Pass**
7	4.5.4.1.2	Transmitted power (with an external antenna connector)		Y	Y	**Pass**
8	4.5.5	RF carrier modulation		Y	Y	**Pass**
9	4.5.6.2	Emissions due to modulation		Y	Y	**Pass**
10	4.5.6.3	Emissions due to transmitter transients		Y	Y	**Pass**
11	4.5.6.4	Emissions due to intermodulation	only for basestation with more than one transmitter	N	N	**---**
12	4.5.6.5	Spurious emissions when allocated a transmit channel	Conducted spurious	Y	Y	**Pass**
			Radiated spurious			**Pass**
13	4.5.7.1	Radio receiver sensitivity		Y	Y	**Pass**
14	4.5.7.2	Radio receiver reference bit error ratio		Y	Y	**Pass**
15	4.5.7.3	Radio receiver interference performance		Y	Y	**Pass**
16	4.5.7.4	Radio receiver blocking case 1		Y	Y	**Pass**
17	4.5.7.5	Radio receiver blocking case 2		Y	Y	**Pass**
18	4.5.7.6	Receiver intermodulation performance		Y	Y	**Pass**
19	4.5.7.7	Spurious emissions when the radio endpoint has no allocated transmit channel	only for portable part	Y	Y	**Pass**

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EN301 406 results overview

Test case	Point	Testcase description	Remarks	Sel.	Verdict
20	4.5.8	Synchronisation port		N	**No test**
21	4.5.9	Equipment identity verification /safeguards		N	**Manufacturer declaration**
22	4.5.10	Efficient use of radio spectrum		N	**Manufacturer declaration**
23	4.5.11	WRS		N	**No test**
24	4.5.12	PP to PP communication		N	**No test**
25	4.5.13	Direct communication		N	**No test**
26	4.5.14	Higher level modulation		N	**No test**

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2.3 Test campaign report

2.3.1 TC 1 Accuracy and stability of RF carriers (4.5.1)

aimed for t ≥ 1 s with Δ f ≤ ± 50 kHz under nominal and extreme conditions

	Deviation [kHz]			
	channel 0	channel 5	channel 9	
nom. Temperature and nom. Voltage	**3.15**	**2.86**	**3.42**	P
0°C and minimum voltage	**-2.60**	**-0.23**	**-3.24**	P
0°C and maximum voltage	**0.34**	**0.24**	**-1.84**	P
+40°C and minimum voltage	**-0.59**	**1.50**	**-0.91**	P
+40°C and maximum voltage	**-1.18**	**2.23**	**-1.01**	P

Measurement uncertainty: < 1%

aimed for t ≤ 1 s with Δ f ≤ ±100 kHz under nominal and extreme conditions

	Deviation [kHz]			
	Channel 0	Channel 5	Channel 9	
nom. Temperature and nom. Voltage	**3.33**	**2.98**	**3.32**	P
0°C and minimum voltage	**0.76**	**-0.29**	**-0.43**	P
0°C and maximum voltage	**0.56**	**0.07**	**-2.52**	P
+40°C and minimum voltage	**-0.82**	**-1.16**	**2.30**	P
+40°C and maximum voltage	**-1.04**	**-1.04**	**-1.03**	P

Comment:minimum voltage =2.2 V

2.3.2 TC 2 Timing jitter: slot- slot on the same channel (8.3)

Test in channel 5 aimed < ± 1 µs	Deviation [µs]		
	positive	Negative	
nom. Temperature and nom. Voltage	**0.145**	**-0.146**	P
0°C and minimum voltage	**0.192**	**-0.157**	P
0°C and maximum voltage	**0.169**	**-0.144**	P
+40°C and minimum voltage	**0.121**	**-0.119**	P
+40°C and maximum voltage	**0.123**	**-0.109**	P

Measurement uncertainty: <= 77.4 ns
Comment:minimum voltage =2.2V

2.3.3 TC 3 Reference timing accuracy of a RFP
only recommended for fixed part

2.3.4 TC 4 Measurement of packet transmission accuracy

The packet time delay minimum shall be greater than 5ms –2µs
The packet time delay maximum shall be less than 5ms+2µs

Voltage(V)	Temperature(℃)	Packet Time Delay(µs)						
		channel 0		channel 5		channel 9		
		max.	min.	max.	min.	max.	min.	
nom.	nom.	**0.102**	**-0.115**	**0.156**	**-0.137**	**0.142**	**-0.177**	P
min.	min.	**0.175**	**-0.196**	**0.175**	**-0.147**	**0.146**	**-0.126**	P
	max.	**0.118**	**-0.091**	**0.143**	**-0.100**	**0.153**	**-0.148**	P
max.	min.	**0.213**	**-0.240**	**0.132**	**-0.152**	**0.196**	**-0.128**	P
	max.	**0.107**	**-0.080**	**0.105**	**-0.090**	**0.119**	**-0.142**	P

Measurement uncertainty: <= 77.4 ns

Comment:minimum voltage =2.2V

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2.3.5   TC 5 Transmission Burst (4.5.3)

Measurement uncertainty: + 0.85 dB / -0.92 dB
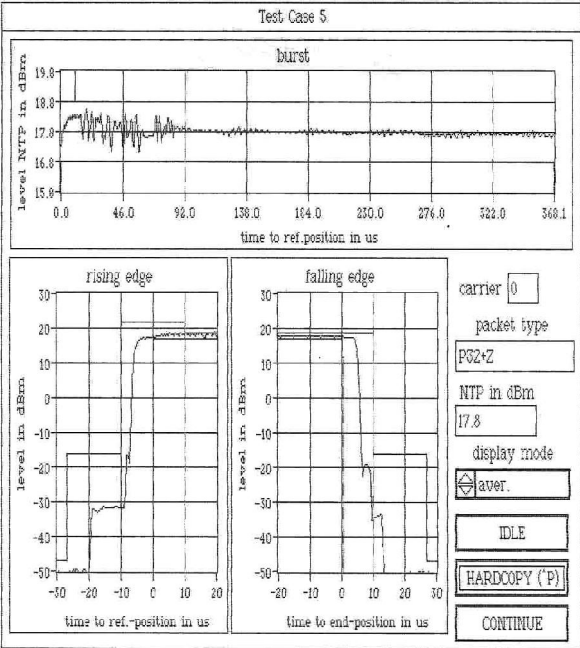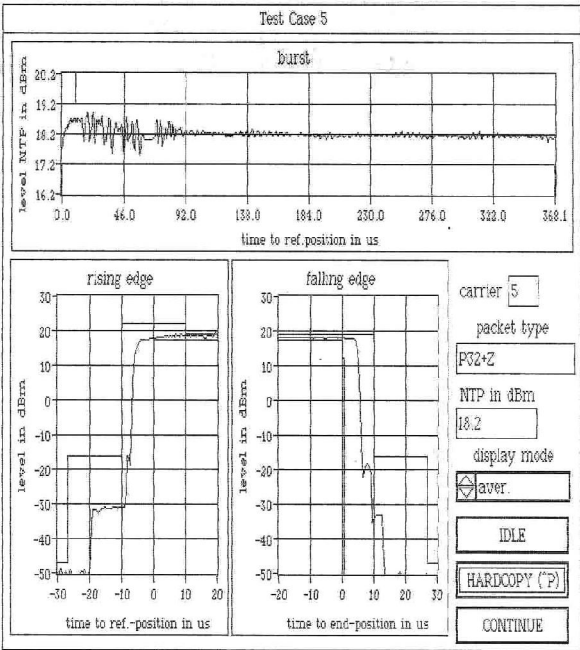
Nom. Temperature and nom. Voltage   P


Nom. Temperature and nom. Voltage   P

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Nom. Temperature and nom. Voltage

+0°C temperature and nom. Voltage

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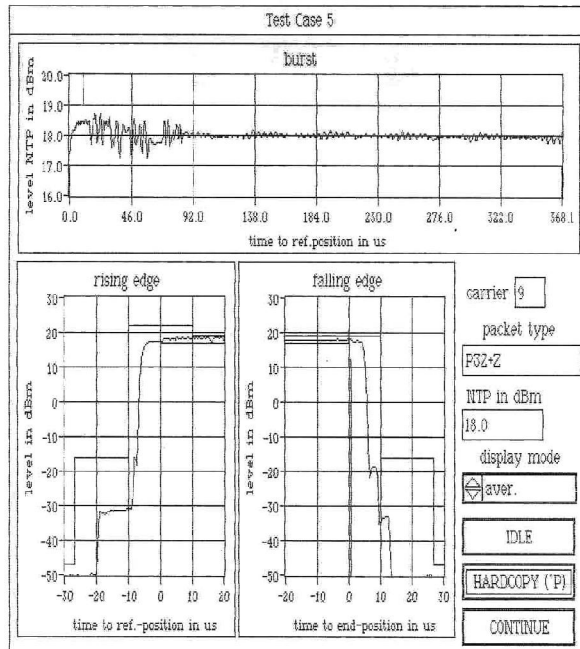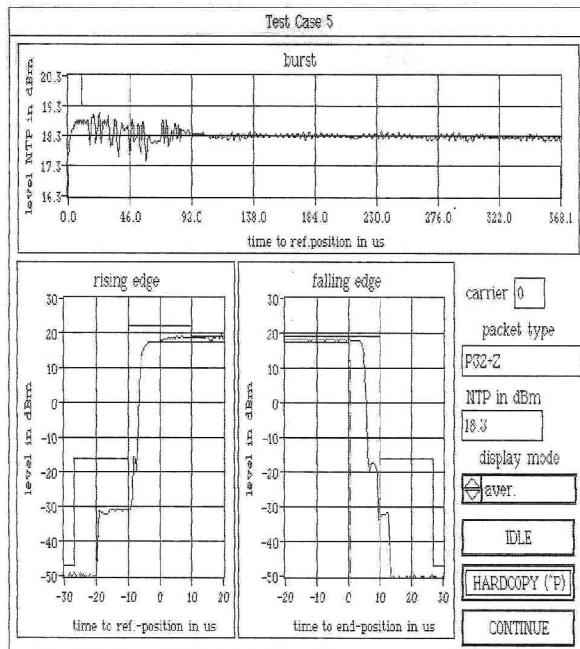
+0°C temperature and nom. Voltage   P

+0°C temperature and nom. Voltage   P

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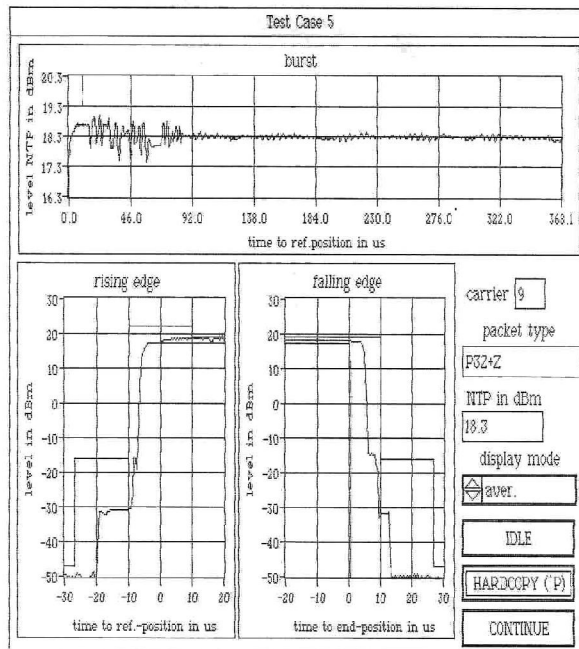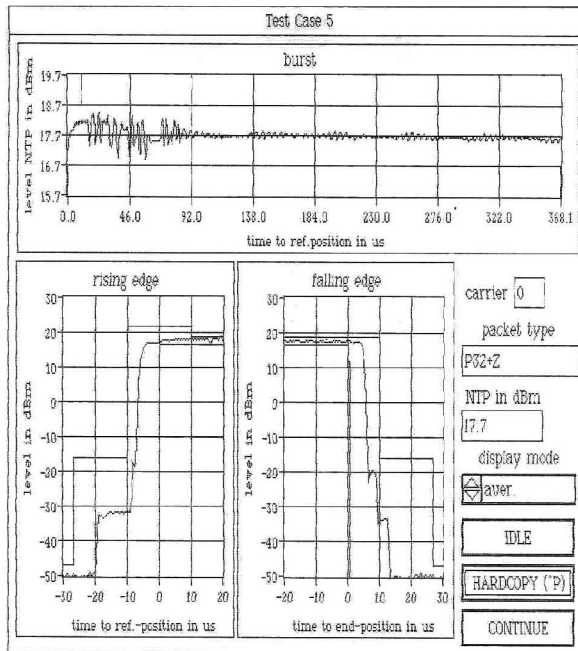
+40°C temperature and nom. Voltage

P

+40°C temperature and nom. Voltage

P

13
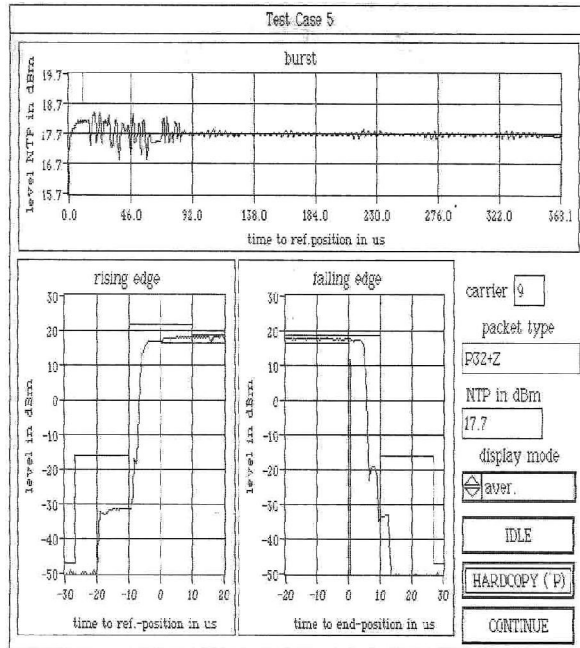
+40°C temperature and nom. Voltage   P

2.3.6   TC 6 Transmitted power: PP and RFP with integral antenna (4.5.4.1.1)

Conducted RF-output power in the Burst: aimed ≤ 250 mW (24 dBm)
Height of receive antenna   actual = **1.50 m**
Radiated field strength maximum at position in degrees   ant. 0 actual = **10°** hor

Antenna gain: aimed with max. 12 dB

Antenna	conducted Power	radiated Power	Antenna gain
Channel 0	17.80 dBm	18.01 dBm	0.21 dB
Channel 5	18.20 dBm	18.01 dBm	-0.19 dB
Channel 9	18.00 dBm	18.23 dBm	0.23 dB

P

Measurement uncertainty radiated: + 3.53 dB / -3.53 dB
Measurement uncertainty conducted: + 0.85 dB / -0.92 dB

2.3.7   TC 7 Transmitted power: FP with an external antenna Connector (4.5.4.1.2)

not applicable

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2.3.8 TC 8 RF-carrier modulation (4.5.5)

part 1:   aimed > ± 259 kHz < ± 403 kHz
part 2-3:   aimed > ± 202 kHz < ± 403 kHz
part 4:   aimed < ± 15 kHz/slot

Measurement uncertainty part 1-3: ± 10 kHz
                          part 4:   ± 2 kHz

TRAFFIC SLOT: 20
TRAFFIC CARRIER: 5
PACKET TYPE: P32+Z
part1: 10 bursts evaluated
maximum positive modulation: 376.43 kHz   P
maximum negative modulation: -369.04 kHz   P
part2: 10 bursts evaluated
maximum positive modulation: 400.47 kHz   P
maximum negative modulation: -402.58 kHz   P
part3: 10 bursts evaluated
maximum positive modulation: 316.35 kHz   P
maximum negative modulation: -324.46 kHz   P
part4: 200 bursts evaluated
averaged frequency drift: 6.93   kHz/slot   P

2.3.9 TC 9 Emissions due to modulation (4.5.6.2)

Measurement uncertainty: + 0.49 dB / -0.51 dB
One exception <-33 dBm (500 nW) permissible

TRAFFIC SLOT: 22
TRAFFIC CARRIER: 0
PACKET TYPE: P32+Z
measured NTP: 17.80 dBm

		measured values	limits	
CARRIER 0:	integrated power	17.80 dBm	---	P
CARRIER 1:	integrated power	- 23.64 dBm	-8 dBm	P
CARRIER 2:	integrated power	- 47.43 dBm	-30 dBm	P
CARRIER 3:	integrated power	- 50.37 dBm	-41 dBm	P
CARRIER 4:	integrated power	- 51.19 dBm	-44 dBm	P
CARRIER 5:	integrated power	- 51.57 dBm	-44 dBm	P
CARRIER 6:	integrated power	- 51.87 dBm	-44 dBm	P
CARRIER 7:	integrated power	- 51.89 dBm	-44 dBm	P
CARRIER 8:	integrated power	- 51.43 dBm	-44 dBm	P
CARRIER 9:	integrated power	- 52.06 dBm	-44 dBm	P

TRAFFIC SLOT: 14
TRAFFIC CARRIER: 5
PACKET TYPE: P32+Z
measured NTP: 18.20 dBm

		measured values	limits	
CARRIER 0:	integrated power	- 51.69 dBm	-44 dBm	P
CARRIER 1:	integrated power	- 51.21 dBm	-44 dBm	P
CARRIER 2:	integrated power	- 50.40 dBm	-41 dBm	P
CARRIER 3:	integrated power	- 47.44 dBm	-30 dBm	P
CARRIER 4:	integrated power	- 23.63 dBm	-8 dBm	P

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CARRIER 5:     integrated power          18.2 dBm          ---          P
                                            0
CARRIER 6:     integrated power       -  23.2 dBm        -8 dBm         P
                                            7
CARRIER 7:     integrated power       -  47.3 dBm        -30 dBm        P
                                            0
CARRIER 8:     integrated power       -  50.1 dBm        -41 dBm        P
                                            5
CARRIER 9:     integrated power       -  51.0 dBm        -44 dBm        P
                                            6
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TRAFFIC SLOT:          16
TRAFFIC CARRIER:        9
PACKET TYPE:           P32+Z
measured NTP:          18.00 dBm
                                     measured values      limits
CARRIER 0:    integrated power      - 52.2  dBm          -44 dBm      P
                                         9
CARRIER 1:    integrated power      - 52.0  dBm          -44 dBm      P
                                         7
CARRIER 2:    integrated power      - 52.2  dBm          -44 dBm      P
                                         0
CARRIER 3:    integrated power      - 52.0  dBm          -44 dBm      P
                                         7
CARRIER 4:    integrated power      - 51.8  dBm          -44 dBm      P
                                         2
CARRIER 5:    integrated power      - 48.1  dBm          -44 dBm      P
                                         8
CARRIER 6:    integrated power      - 50.6  dBm          -41 dBm      P
                                         1
CARRIER 7:    integrated power      - 47.9  dBm          -30 dBm      P
                                         2
CARRIER 8:    integrated power      - 24.0  dBm           -8 dBm      P
                                         7
CARRIER 9:    integrated power       18.0  dBm           ---         P
                                         0
```

2.3.10   TC 10 Emissions due to transmitter transients (4.5.6.3)

Measurement uncertainty: + 0.49 dB / -0.51 dB

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TRAFFIC SLOT:          18
TRAFFIC CARRIER:        0
PACKET TYPE:           P32+Z
                                measured values            limits
CARRIER 0:    max. Power   59.09 mW  (  17.72 dBm)         ---        p
CARRIER 1:    max. Power   37.62 uW  ( -14.25 dBm)         -6 dBm     p
CARRIER 2:    max. Power   28.15 nW  ( -45.50 dBm)        -14 dBm     p
CARRIER 3:    max. Power   12.13 nW  ( -49.16 dBm)        -24 dBm     p
CARRIER 4:    max. Power   35.78 nW  ( -44.46 dBm)        -30 dBm     p
CARRIER 5:    max. Power    9.16 nW  ( -50.38 dBm)        -30 dBm     p
CARRIER 6:    max. Power    8.95 nW  ( -50.48 dBm)        -30 dBm     p
CARRIER 7:    max. Power    7.42 nW  ( -51.29 dBm)        -30 dBm     p
CARRIER 8:    max. Power   39.29 nW  ( -44.06 dBm)        -30 dBm     p
CARRIER 9:    max. Power    9.43 nW  ( -50.25 dBm)        -30 dBm     p
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TRAFFIC SLOT:        20
TRAFFIC CARRIER:     1
PACKET TYPE:         P32+Z
                          measured values            limits
CARRIER 0:    max. Power   29.95 uW  ( -15.24 dBm)    -6 dBm      p
CARRIER 1:    max. Power   58.40 mW  (  17.66 dBm)    ---         p
CARRIER 2:    max. Power   34.87 uW  ( -14.58 dBm)    -6 dBm      p
CARRIER 3:    max. Power   26.40 nW  ( -45.78 dBm)   -14 dBm      p
CARRIER 4:    max. Power   13.40 nW  ( -48.73 dBm)   -24 dBm      p
CARRIER 5:    max. Power   33.16 nW  ( -44.79 dBm)   -30 dBm      p
CARRIER 6:    max. Power    8.25 nW  ( -50.84 dBm)   -30 dBm      p
CARRIER 7:    max. Power    9.66 nW  ( -50.15 dBm)   -30 dBm      p
CARRIER 8:    max. Power    8.69 nW  ( -50.61 dBm)   -30 dBm      p
CARRIER 9:    max. Power   46.55 nW  ( -43.32 dBm)   -30 dBm      p

TRAFFIC SLOT:        22
TRAFFIC CARRIER:     2
PACKET TYPE:         P32+Z
                          measured values            limits
CARRIER 0:    max. Power   22.94 nW  ( -46.39 dBm)   -14 dBm      p
CARRIER 1:    max. Power   28.42 uW  ( -15.46 dBm)    -6 dBm      p
CARRIER 2:    max. Power   59.78 mW  (  17.77 dBm)    ---         p
CARRIER 3:    max. Power   34.87 uW  ( -14.58 dBm)    -6 dBm      p
CARRIER 4:    max. Power   22.54 nW  ( -46.47 dBm)   -14 dBm      p
CARRIER 5:    max. Power   13.09 nW  ( -48.83 dBm)   -24 dBm      p
CARRIER 6:    max. Power   35.36 nW  ( -44.51 dBm)   -30 dBm      p
CARRIER 7:    max. Power    7.47 nW  ( -51.27 dBm)   -30 dBm      p
CARRIER 8:    max. Power    7.29 nW  ( -51.37 dBm)   -30 dBm      p
CARRIER 9:    max. Power    9.27 nW  ( -50.33 dBm)   -30 dBm      p

TRAFFIC SLOT:        14
TRAFFIC CARRIER:     3
PACKET TYPE:         P32+Z
                          measured values            limits
CARRIER 0:    max. Power   14.37 nW  ( -48.43 dBm)   -24 dBm      p
CARRIER 1:    max. Power   28.32 nW  ( -45.48 dBm)   -14 dBm      p
CARRIER 2:    max. Power   29.60 uW  ( -15.29 dBm)    -6 dBm      p
CARRIER 3:    max. Power   60.13 mW  (  17.79 dBm)    ---         p
CARRIER 4:    max. Power   36.33 uW  ( -14.40 dBm)    -6 dBm      p
CARRIER 5:    max. Power   26.24 nW  ( -45.81 dBm)   -14 dBm      p
CARRIER 6:    max. Power   16.93 nW  ( -47.71 dBm)   -24 dBm      p
CARRIER 7:    max. Power   33.16 nW  ( -44.79 dBm)   -30 dBm      p
CARRIER 8:    max. Power    8.20 nW  ( -50.86 dBm)   -30 dBm      p
CARRIER 9:    max. Power   10.60 nW  ( -49.75 dBm)   -30 dBm      p

TRAFFIC SLOT:        16
TRAFFIC CARRIER:     4
PACKET TYPE:         P32+Z
                          measured values            limits
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CARRIER 0:      max. Power    35.99 nW  ( -44.44 dBm)     -30 dBm      P
CARRIER 1:      max. Power    10.60 nW  ( -49.75 dBm)     -24 dBm      p
CARRIER 2:      max. Power    27.34 nW  ( -45.63 dBm)     -14 dBm      p
CARRIER 3:      max. Power    31.76 uW  ( -14.98 dBm)      -6 dBm      p
CARRIER 4:      max. Power    60.84 mW  (  17.84 dBm)      ---         p
CARRIER 5:      max. Power    27.92 uW  ( -15.54 dBm)      -6 dBm      p
CARRIER 6:      max. Power    23.62 nW  ( -46.27 dBm)     -14 dBm      p
CARRIER 7:      max. Power    13.01 nW  ( -48.86 dBm)     -24 dBm      p
CARRIER 8:      max. Power    38.83 nW  ( -44.11 dBm)     -30 dBm      p
CARRIER 9:      max. Power     8.25 nW  ( -50.84 dBm)     -30 dBm      p
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TRAFFIC SLOT: 18
TRAFFIC CARRIER: 5
PACKET TYPE: P32+Z

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                           measured values        limits
CARRIER 0:      max. Power     8.10 nW  ( -50.91 dBm)     -30 dBm      p
CARRIER 1:      max. Power    32.77 nW  ( -44.84 dBm)     -30 dBm      p
CARRIER 2:      max. Power    10.79 nW  ( -49.67 dBm)     -24 dBm      p
CARRIER 3:      max. Power    26.40 nW  ( -45.78 dBm)     -14 dBm      p
CARRIER 4:      max. Power    29.26 uW  ( -15.34 dBm)      -6 dBm      p
CARRIER 5:      max. Power    61.92 mW  (  17.92 dBm)      ---         p
CARRIER 6:      max. Power    28.42 uW  ( -15.46 dBm)      -6 dBm      p
CARRIER 7:      max. Power    26.24 nW  ( -45.81 dBm)     -14 dBm      p
CARRIER 8:      max. Power    13.16 nW  ( -48.81 dBm)     -24 dBm      p
CARRIER 9:      max. Power    35.36 nW  ( -44.51 dBm)     -30 dBm      p
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TRAFFIC SLOT: 20
TRAFFIC CARRIER: 6
PACKET TYPE: P32+Z

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                           measured values        limits
CARRIER 0:      max. Power     7.64 nW  ( -51.17 dBm)     -30 dBm      p
CARRIER 1:      max. Power     7.29 nW  ( -51.37 dBm)     -30 dBm      p
CARRIER 2:      max. Power    35.57 nW  ( -44.49 dBm)     -30 dBm      p
CARRIER 3:      max. Power    15.15 nW  ( -48.20 dBm)     -24 dBm      p
CARRIER 4:      max. Power    26.71 nW  ( -45.73 dBm)     -14 dBm      p
CARRIER 5:      max. Power    31.02 uW  ( -15.08 dBm)      -6 dBm      p
CARRIER 6:      max. Power    61.92 mW  (  17.92 dBm)      ---         p
CARRIER 7:      max. Power    30.48 uW  ( -15.16 dBm)      -6 dBm      p
CARRIER 8:      max. Power    28.48 nW  ( -45.45 dBm)     -14 dBm      p
CARRIER 9:      max. Power    10.30 nW  ( -49.87 dBm)     -24 dBm      p
```

TRAFFIC SLOT: 22
TRAFFIC CARRIER: 7
PACKET TYPE: P32+Z

```
                           measured values        limits
CARRIER 0:      max. Power     6.64 nW  ( -51.78 dBm)     -30 dBm      p
CARRIER 1:      max. Power     7.92 nW  ( -51.02 dBm)     -30 dBm      p
CARRIER 2:      max. Power     8.69 nW  ( -50.61 dBm)     -30 dBm      p
CARRIER 3:      max. Power    40.93 nW  ( -43.88 dBm)     -30 dBm      p
CARRIER 4:      max. Power    13.16 nW  ( -48.81 dBm)     -24 dBm      p
CARRIER 5:      max. Power    30.73 nW  ( -45.12 dBm)     -14 dBm      p
CARRIER 6:      max. Power    28.92 uW  ( -15.39 dBm)      -6 dBm      p
CARRIER 7:      max. Power    61.92 mW  (  17.92 dBm)      ---         p
CARRIER 8:      max. Power    36.97 uW  ( -14.32 dBm)      -6 dBm      p
CARRIER 9:      max. Power    23.90 nW  ( -46.22 dBm)     -14 dBm      p
```

TRAFFIC SLOT: 14
TRAFFIC CARRIER: 8
PACKET TYPE: P32+Z

```
                           measured values        limits
```

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```
CARRIER 0:     max. Power     19.82 nW  ( -47.03 dBm)      -30 dBm        p
CARRIER 1:     max. Power      6.92 nW  ( -51.60 dBm)      -30 dBm        p
CARRIER 2:     max. Power      9.27 nW  ( -50.33 dBm)      -30 dBm        p
CARRIER 3:     max. Power      7.21 nW  ( -51.42 dBm)      -30 dBm        p
CARRIER 4:     max. Power     40.22 nW  ( -43.96 dBm)      -30 dBm        p
CARRIER 5:     max. Power     10.36 nW  ( -49.85 dBm)      -24 dBm        p
CARRIER 6:     max. Power     21.64 nW  ( -46.65 dBm)      -14 dBm        p
CARRIER 7:     max. Power     29.09 uW  ( -15.36 dBm)       -6 dBm        p
CARRIER 8:     max. Power     61.20 mW  (  17.87 dBm)       ---           p
CARRIER 9:     max. Power     32.89 uW  ( -14.83 dBm)       -6 dBm        p
```

TRAFFIC SLOT: 16
TRAFFIC CARRIER: 9
PACKET TYPE: P32+Z

```
                               measured values            limits
CARRIER 0:     max. Power      6.60 nW  ( -51.80 dBm)      -30 dBm        p
CARRIER 1:     max. Power     20.65 nW  ( -46.85 dBm)      -30 dBm        p
CARRIER 2:     max. Power      7.87 nW  ( -51.04 dBm)      -30 dBm        p
CARRIER 3:     max. Power      7.47 nW  ( -51.27 dBm)      -30 dBm        p
CARRIER 4:     max. Power      7.55 nW  ( -51.22 dBm)      -30 dBm        p
CARRIER 5:     max. Power     39.75 nW  ( -44.01 dBm)      -30 dBm        p
CARRIER 6:     max. Power     10.24 nW  ( -49.90 dBm)      -24 dBm        p
CARRIER 7:     max. Power     28.32 nW  ( -45.48 dBm)      -14 dBm        p
CARRIER 8:     max. Power     29.95 uW  ( -15.24 dBm)       -6 dBm        p
CARRIER 9:     max. Power     61.20 mW  (  17.87 dBm)       ---           p
```

2.3.11   TC 11 Emissions due to intermodulation (4.5.6.4)

only for basestations with several transmitters

2.3.12   TC 12 Spurious emissions when allocated a transmit channel (4.5.6.5)

Channel 5, radiated

values <6 dB of the limit-line are listed

30 MHz – 1 GHz	aimed ≤ -36 dBm	actual ≤ -52.85 dBm	P
1 GHz – 4 GHz	aimed ≤ -30 dBm	actual ≤ -45.72 dBm	P
Peak at 3.777 GHz hor.	aimed ≤ -30 dBm	actual ≤ -36.69 dBm	P
broadcast bands according to TBR 6	aimed ≤ -47 dBm	actual ≤ -71.05 dBm	P

Measurement uncertainty f<1GHz: + 2.89 dB / -2.98 dB
                       f>1GHz: + 3.53 dB / -3.53 dB

Channel 5, conducted

TRAFFIC SLOT: 2
TRAFFIC CARRIER: 5
PACKET TYPE: P32+Z
```
Wideband Measurements
Range from    300kHz to   12750.00 MHz                                    P
```

Measurement uncertainty f>1GHz: + 1.40 dB / -1.75 dB

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2.3.13   TC 13 Radio receiver sensitivity (4.5.7.1)

At a level of –83 dBm the BER shall be $\leq 10^{-3}$.
Measurement uncertainty: + 0.25 dB / -0.27 dB

TRAFFIC SLOT:	14	
TRAFFIC CARRIER:	0	
PACKET TYPE:	P32+Z	

Center frequency offset: 0 kHz
BER: 0.00000000   FER: 0.000000   evaluated: 320 kbit   P
Center frequency offset: 50 kHz
BER: 0.00000000   FER: 0.000000   evaluated: 320 kbit   P
Center frequency offset: -50 kHz
BER: 0.00000000   FER: 0.000000   evaluated: 320 kbit   P

TRAFFIC SLOT: 16
TRAFFIC CARRIER: 5
PACKET TYPE: P32+Z
Center frequency offset: 0 kHz
BER: 0.00000000   FER: 0.000000   evaluated: 320 kbit   P
Center frequency offset: 50 kHz
BER: 0.00000000   FER: 0.000000   evaluated: 320 kbit   P
Center frequency offset: -50 kHz
BER: 0.00000000   FER: 0.000000   evaluated: 320 kbit   P

TRAFFIC SLOT: 18
TRAFFIC CARRIER: 9
PACKET TYPE: P32+Z
Center frequency offset: 0 kHz
BER: 0.00000000   FER: 0.000000   evaluated: 320 kbit   P
Center frequency offset: 50 kHz
BER: 0.00000000   FER: 0.000000   evaluated: 320 kbit   P
Center frequency offset: -50 kHz
BER: 0.00000000   FER: 0.000000   evaluated: 320 kbit   P

2.3.14   **TC 14 Radio receiver reference bit error ratio (4.5.7.2)**

At a level of –73 dBm the BER shall be $\leq 10^{-5}$, the FER shall be $\leq 5*10^{-4}$.
Measurement uncertainty: + 0.25 dB / -0.27 dB

TRAFFIC SLOT: 20
TRAFFIC CARRIER: 0
PACKET TYPE: P32+Z
BER: 0.00000000   FER: 0.000000   evaluated: 32.000 Mbit   P

TRAFFIC SLOT: 22
TRAFFIC CARRIER: 5
PACKET TYPE: P32+Z
BER: 0.00000000   FER: 0.000000   evaluated: 32.000 Mbit   P

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```
TRAFFIC SLOT:          14
TRAFFIC CARRIER:       9
PACKET TYPE:           P32+Z
BER: 0.00000000    FER: 0.000000        evaluated:  32.000 Mbit                    P
```

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2.3.15   TC 15 Receiver interference performance (4.5.7.3)

The BER shall be $\leq 10^{-3}$.

Measurement uncertainty: + 0.32 dB / -0.34 dB

TRAFFIC SLOT: 16
TRAFFIC CARRIER: 0
PACKET TYPE: P32+Z

BER:	FER:	kBit:	intf.car:	lev in dBm:	
					P
0.000000	0.000000	320	-3	-33.0	P
0.000000	0.000000	320	-2	-39.0	P
0.000000	0.000000	320	-1	-60.0	P
0.000105	0.000000	523	0	-84.0	P
0.000000	0.000000	320	1	-60.0	P
0.000000	0.000000	320	2	-39.0	P
0.000000	0.000000	320	3	-33.0	P
0.000000	0.000000	320	4	-33.0	P
0.000000	0.000000	320	5	-33.0	P
0.000000	0.000000	320	6	-33.0	P
0.000000	0.000000	320	7	-33.0	P
0.000000	0.000000	320	8	-33.0	P
0.000000	0.000000	320	9	-33.0	P
0.000000	0.000000	320	10	-33.0	P
0.000000	0.000000	320	11	-33.0	P
0.000000	0.000000	320	12	-33.0	P

TRAFFIC SLOT: 18
TRAFFIC CARRIER: 5
PACKET TYPE: P32+Z

BER:	FER:	kBit:	intf.car:	lev in dBm:	
					P
0.000000	0.000000	320	-3	-33.0	P
0.000000	0.000000	320	-2	-33.0	P
0.000000	0.000000	320	-1	-33.0	P
0.000000	0.000000	320	0	-33.0	P
0.000000	0.000000	320	1	-33.0	P
0.000000	0.000000	320	2	-33.0	P
0.000000	0.000000	320	3	-39.0	P
0.000000	0.000000	320	4	-60.0	P
0.000063	0.000000	477	5	-84.0	P
0.000000	0.000000	320	6	-60.0	P
0.000000	0.000000	320	7	-39.0	P
0.000000	0.000000	320	8	-33.0	P
0.000000	0.000000	320	9	-33.0	P
0.000000	0.000000	320	10	-33.0	P
0.000000	0.000000	320	11	-33.0	P
0.000000	0.000000	320	12	-33.0	P

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```
TRAFFIC SLOT:          16
TRAFFIC CARRIER:        9
PACKET TYPE:          P32+Z
BER:    FER:    kBit:   intf.car: lev in dBm:                              P
0.000000 0.000000   320    -3    -33.0                                    P
0.000000 0.000000   320    -2    -33.0                                    P
0.000000 0.000000   320    -1    -33.0                                    P
0.000000 0.000000   320     0    -33.0                                    P
0.000000 0.000000   320     1    -33.0                                    P
0.000000 0.000000   320     2    -33.0                                    P
0.000000 0.000000   320     3    -33.0                                    P
0.000000 0.000000   320     4    -33.0                                    P
0.000000 0.000000   320     5    -33.0                                    P
0.000000 0.000000   320     6    -33.0                                    P
0.000000 0.000000   320     7    -39.0                                    P
0.000000 0.000000   320     8    -60.0                                    P
0.000042 0.000000   400     9    -84.0                                    P
0.000000 0.000000   320    10    -60.0                                    P
0.000000 0.000000   320    11    -39.0                                    P
0.000000 0.000000   320    12    -33.0                                    P
```

2.3.16   TC 16 Radio receiver blocking, case 1 (4.5.7.4)

The BER shall be $\leq 10^{-3}$.

Measurement uncertainty: + 0.81 dB / -0.96 dB conducted
Measurement uncertainty: + 3.00 dB / -3.00 dB radiated

```
TRAFFIC SLOT:          18
TRAFFIC CARRIER:        5
PACKET TYPE:          P32+Z
transmitter level: -80.00 dBm
additional CW interferer level: 0.00 dB
start  frequency:       25.00  MHz
stop   frequency:      100.00  MHz
step   frequency:        1.00  MHz
320 kBit to evaluate                                                      P


TRAFFIC SLOT:          20
TRAFFIC CARRIER:        5
PACKET TYPE:          P32+Z
transmitter level: -80.00 dBm
additional CW interferer level: 0.00 dB
start  frequency:      101.00  MHz
stop   frequency:     2900.00  MHz
step   frequency:        1.00  MHz
320 kBit to evaluate                                                      p


TRAFFIC SLOT:          14
TRAFFIC CARRIER:        5
PACKET TYPE:          P32+Z
transmitter level: -80.00 dBm
additional CW interferer level: 0.00 dB
start  frequency:     2901.00  MHz
stop   frequency:    12750.00  MHz
step   frequency:        1.00  MHz
320 kBit to evaluate                                                      p
```

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2.3.17 TC 17 Radio receiver blocking, case 2 (4.5.7.5)

The BER shall be $\leq 10^{-3}$.
Measurement uncertainty: + 0.63 dB / -0.71 dB

TRAFFIC SLOT: 22
TRAFFIC CARRIER: 0
PACKET TYPE: P32+Z
BER: 0.00000000   FER: 0.000000   evaluated: 320 kbit   P

TRAFFIC SLOT: 14
TRAFFIC CARRIER: 5
PACKET TYPE: P32+Z
BER: 0.00000000   FER: 0.000000   evaluated: 320 kbit   P

TRAFFIC SLOT: 16
TRAFFIC CARRIER: 9
PACKET TYPE: P32+Z
BER: 0.00000000   FER: 0.000000   evaluated: 320 kbit   P

2.3.18 TC 18 Receiver intermodulation performance (4.5.7.6)

The BER shall be $\leq 10^{-3}$.
Measurement uncertainty: + 0.40 dB / -0.43 dB

TRAFFIC SLOT: 18
TRAFFIC CARRIER: 0
PACKET TYPE: P32+Z
M: 0 A: 2 B: 4
BER: 0.002311   FER: 0.0000   eval.data: 1594 kbit   P
M: 0 A: -2 B: -4
BER: 0.000030   FER: 0.0000   eval.data: 369 kbit   P

TRAFFIC SLOT: 20
TRAFFIC CARRIER: 5
PACKET TYPE: P32+Z
M: 5 A: 7 B: 9
BER: 0.000052   FER: 0.0000   eval.data: 424 kbit   P
M: 5 A: 3 B: 1
BER: 0.000003   FER: 0.0000   eval.data: 326 kbit   P

TRAFFIC SLOT: 22
TRAFFIC CARRIER: 9
PACKET TYPE: P32+Z
M: 9 A: 11 B: 13
BER: 0.000000   FER: 0.0000   eval.data: 320 kbit   P
M: 9 A: 7 B: 5
BER: 0.000027   FER: 0.0000   eval.data: 376 kbit   P

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2.3.19   TC 19 Spurious emissions when the radio endpoint has no allocated transmit ch. (4.5.7.7)

The EUT shall conformance

Outside the DECT band:

The emission as measured shall not be greater than 2nW (-57dbm) between 30MHz and 1GHz; and between 1GHz and 12.75GHz the emission as measured shall not exceed 20nW(-47dBm).

Inside the DECT band:

The power level as measured of any spurious emission shall not exceed 2nW(-57dBm) in a 1MHz Bandwidth.

In one 1MHz band within the DECT frequency band, the maximum allowable ERP shall be less than 20nW(-47dBm)

In up to two bands of 30KHz, the maximum ERP shall less than 250nw(-36dBm)

Radiated spurious emission

RF ranges	Maximun peak power level	Result/max.value	
30MHz--------1.0GHz	2nW(-57dBm)	-70.65 dBm	P
1GHz----------4GHz	20nW(-47dBm)	-54.23 dBm	P
Inside the DECT band	2nW(-57dBm)	-63.01 dBm	P

Measurement uncertainty radiated: + 3.53 dB / -3.53 dB

Conducted spurious emission

RF ranges	Maximun peak power level	Result/max.value	
30MHz--------1.0GHz	2nW(-57dBm)	-70.95 dBm	P
1GHz---------12.75GHz	20nW(-47dBm)	-55.11 dBm	P
Inside the DECT band	2nW(-57dBm)	-64.18 dBm	P

Measurement uncertainty conducted:+ 0.85 dB / -0.92 dB

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2.3.20   TC 20 Synchronisation port (4.5.8)

   No test

2.3.21   TC 21 Equipment identity verification (4.5.9)

Statement of the applicant"

2.3.22   TC 22 Efficient use of radio spectrum (4.5.10)

Statement of the applicant"

2.3.23   TC23 WRS (4.5.11)

No test

2.3.24   TC24 PP to PP communication (4.5.12)

No test

2.3.25   TC25 Direct communication (4.5.13)

No test

2.3.26   TC26 Higher level modulation (4.5.14)

No test

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4 Appendix   Photo of the Test Candidate (exterior)

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Photo of the Test Candidate (interior)
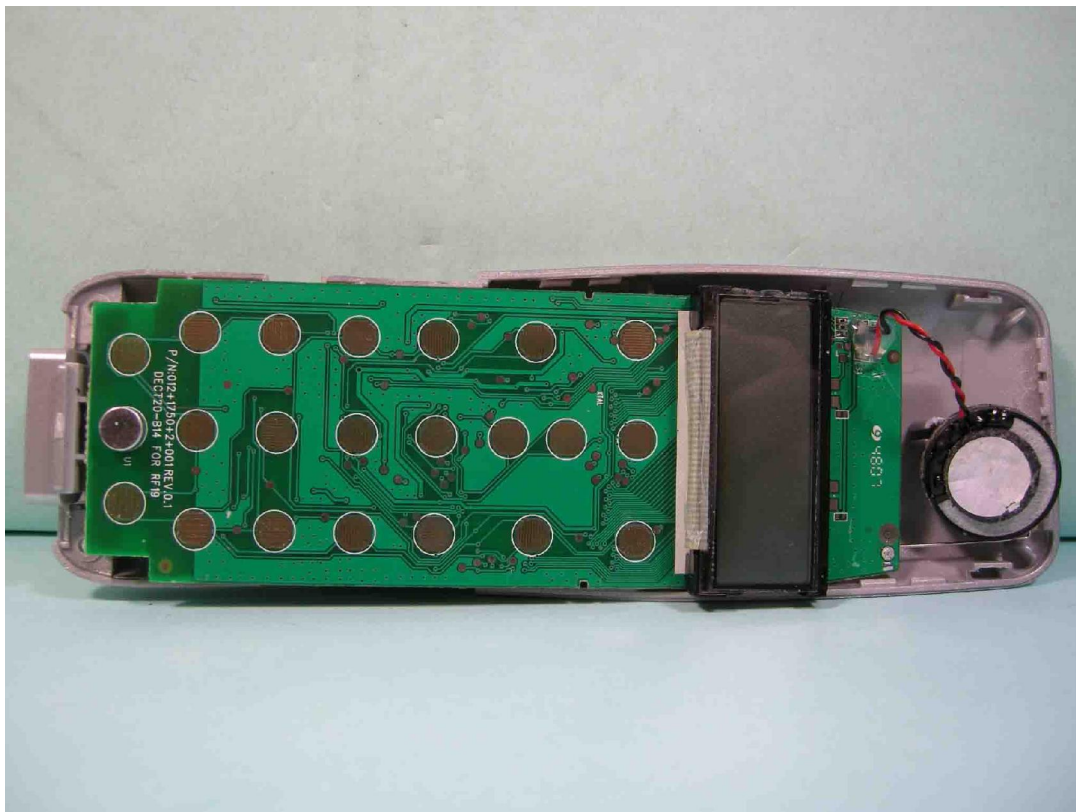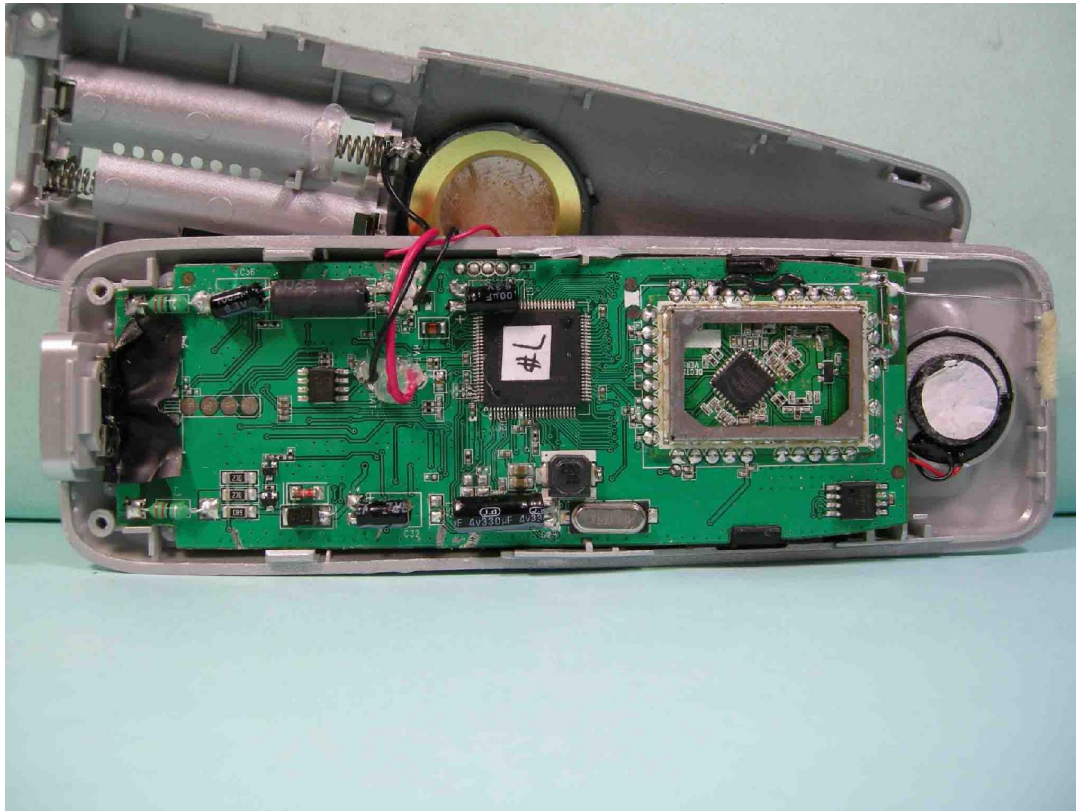
Report No.: 60.860.8.008.01

MANUFACTURER DECLARATION

SunCorp Communications Limited
Room 1907-08, 19/F, Harcourt House, 39 Gloucester Road, Wanchai, Hong Kong

(Name / Address)

declares for the Digital Enhanced Cordless Telecommunications (DECT) telephone system specified as

DECT20-B14-RF19

The Portable Part (PP):

It is not possible for the user to alter the IPEI using any normally accessible procedure. We supply, in addition to the equipment, sufficient means in the equipment with instructions in the documentation to permit validation of the Equipment Manufacturer's Code and verification of the existence of the Portable equipment Serial Number (PSN) code in the equipment.

The Fixed Part (FP):

DECT FPs which do not transmit the TA escape message transmits the Nт message as defined in EN 300 175-3 [3] at least once every 10 seconds on all active physical channels; These Nт identity messages are transmitted with the appropriate A-field header code as defined in EN 300 175-3[3] and the Nт message contains an ETSI distributed code as defined in EN 300 175-6[6].

(Date)   2008-3-13

(Printed full Name) CW Cheung

For and on behalf of
SunCorp Communications Limited
新 確 通 訊 有 限 公 司

Authorized Signature(s)

(Authorized Signature & Company Chop)

BABT

MANUFACTURER DECLARATION

SunCorp Communications Limited

Room 1907-08, 19/F, Harcourt House, 39 Gloucester Road, Wanchai, Hong Kong

(Name / Address)

declare for the Digital Enhanced Cordless Telecommunications (DECT) telephone system specified as

DECT20-B14-RF19

(Model Number)

For the portable radio termination (PT):

The first PT transmission on the newly selected channel is made in accordance with the scan sequence of the addressed RFP.

To continue transmitting on the newly selected physical channel the PT transmissions within 2 frames of the first PT transmission.

For the fixed radio termination (FT):

The RFP do not transmit on more than 2 physical channels for which complementary physical channels do not exist.

A complementary physical channel is a physical channel between the same two radio endpoints which occurs 5 ms before or after the physical channel to which is complementary.

When an FT is addressing a specific PT then the first FT transmission is made in accordance with the scan sequence of the addressed PT receiver.

To continue transmitting on the selected physical channel the FT receives and indication that the PT is receiving the FT transmissions within 2 frames of the first FT transmission.

For the channel release:

A REP cease transmission on all physical channels if it has not received a valid indication of the other radio endpoint's identity within 10 seconds of the receipt of the last indication.

A REP which transmits on both the physical channel and complementary physical channel cease to transmit on the channels if either:

- The receiving endpoint indicate to the transmitting endpoint that transmission cease on both these physical channels; or
- The transmitting FT or PT is no longer attempting to receive at least one physical channel from the FT or PT to which it is transmitting.

In General:

No more than two physical channels based on the half slot format are sent within the same frame to the same REP;

The EUT is capable of communicating on all 10 DECT RF channels

2008-3-13
(Date)

CW Cheung
(Printed full name)

For and on behalf of
SunCorp Communications Limited
新 雄 通 訊 有 限 公 司
(Authorized signature and company chop)

Authorized Signature(s)

BABT